

Work Order ID 62167

Monday, September 20, 2010 10:13:14 AM



Page 1

Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID:

Item Name: Crosstube Turning Detail

Stop



Start Date: 9/20/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: *✓*Date: *10-09-20*

Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D212-664-141	Rev D

100 0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

AM 10-09-210

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113
 2-Turn first side as per Folio FA113
 3-File down transition lines smooth.

110 0.00



QC1- Inspect dimensions to dimension sheet

0.00

Memo

0.00

AM 10-09-210

Quality Control

120 0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

AM 10-09-210

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA113
 2-File down transition lines smooth.
 3-Remove sand and plugs

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D212-664-10TRN PAR #: NCR10-351 Fault Category: x-tubes NCR: No DQA: Date: 10/10/01
 Resolution: accepted Disposition: use as is QA: N/C Closed: Date: 10/10/01

NCR: 62167		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.09.28	10D	Some dims on OD are out of tolerance R/C: Lack of attention	CP 10.09.28 051042	Acceptable per attached SR.	CP 10.09.28 051042	S 10/09/01 051042	CP 10.09.28 051042	S 10/09/01 051042

NOTE: Date & initial all entries

Work Order ID 62167

Monday, September 20, 2010 10:13:14 AM



Page 2

Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID:

Item Name: Crosstube Turning Detail

Stop



Start Date: 9/20/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberReject
StampInsp.
Stamp

130

QC1- Inspect dimensions to dimension sheet

0.00



QC

Quality Control

Am 10-09-21 ①

140

QC8- Inspect parts - second check

0.00



QC

Quality Control

S10/09/23 / P10.09/23

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

SAD 10-09-28

①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 62167

Monday, September 20, 2010 10:13:14 AM



Page 3

Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID:

Item Name: Crosstube Turning Detail

Stop



Start Date: 9/20/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/30/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC

Quality Control

QC3- Inspect Part Finish

0.00

DP

10-9-28

170



Packaging

Packaging

0.00

DP

10-9-28

180



Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

Identify and Stock in kanban rack
Location: 46

0.00

10/09/29 JJ

10/09/28 Q

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, September 20, 2010 10:13:19 AM

Page 1

Work Order ID: 62167



Parent Item: D212-664-101TRN



Parent Item Name: Crosstube Turning Detail

Start Date: 9/20/2010

Required Date: 9/30/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec
IPP Rev B 08.04.02 removed Polish EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128		Manufactured		No		120	Each	41.0000	1	1		AM	10-08-21 0

Crosstube Material

Location	Loc Qty	Loc Code
LG	41	
53593	7	
57911	34	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	62167
Description: Crosstube Assembly (205/212/412 High Fwd)	Part Number:	D212-664-141
Inspection Dwg: D212-664-141 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010	0.200	/	A/N 04	
	R0.063	+/-0.010	R0.063	/		
	2.740	+0.005/-0.000	2.742	/		
	5.097	+/-0.030	5.092	/		
	2.304	+0.005/-0.000	2.309	/		
	2.340	+0.005/-0.000	2.345	/		
	2.398	+0.005/-0.000	2.403	/		
	2.448	+0.005/-0.000	2.453	/		
	2.498	+0.005/-0.000	2.503	/		
	2.549	+0.005/-0.000	2.554	/		
	2.599	+0.005/-0.000	2.604	/		
	2.671	+0.005/-0.000	2.676	/		
	2.701	+0.005/-0.000	2.706	/		
					N/A GP	
SIDE B	0.200	+/-0.010	0.200	/		
	R0.063	+/-0.010	R0.063	/		10.09.28
	2.740	+0.005/-0.000	2.741	/		
	5.097	+/-0.030	5.092	/		
	2.304	+0.005/-0.000	2.309	/		
	2.340	+0.005/-0.000	2.345	/		
	2.398	+0.005/-0.000	2.403	/		
	2.448	+0.005/-0.000	2.453	/		
	2.498	+0.005/-0.000	2.503	/		
	2.549	+0.005/-0.000	2.554	/		
	2.599	+0.005/-0.000	2.604	/		
	2.671	+0.005/-0.000	2.676	/		
	2.701	+0.005/-0.000	2.706	/		
	126.514	+/-0.020	126.510	/		

Measured by:	A. M	Audited by:		Prototype Approval:	N/A
Date:	10.09.21	Date:		Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-101)	KJ/JLM	
B	06.03.15	Tolerance revised for 5.097 per Dwg Rev update	KJ/JLM	
C	07.05.28	Dwg Rev updated	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ	M

DART AEROSPACE LTD	Work Order:	42167
Description: Crosstube Assembly (205/212/412 High Fwd)	Part Number:	D212-664-141
Inspection Dwg: D212-664-141 Rev: D		Page 1 of 1

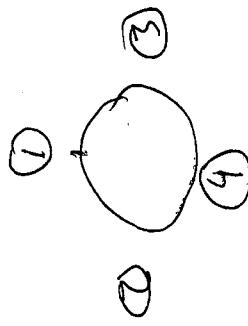
FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
→ SIDE A	0.200	+/-0.010 .200	✓		12" caliper	ED-14
	R0.063	+/-0.010 .060	✓		R-CG	
	2.740	+0.005/-0.000 2.727		✓	ED-14	
	5.097	+/-0.030 5.089	✓		"	
	2.304	+0.005/-0.000 2.289		✓	"	
	2.340	+0.005/-0.000 2.330		✓	"	
	2.398	+0.005/-0.000 2.394		✓	"	
	2.448	+0.005/-0.000 2.446		✓	"	
	2.498	+0.005/-0.000 2.500	✓		"	
	2.549	+0.005/-0.000 2.548	✓		"	
	2.599	+0.005/-0.000 2.599	✓		"	
	2.671	+0.005/-0.000 2.676	✓		"	
	2.701	+0.005/-0.000 2.706	✓		"	
→ SIDE B	0.200	+/-0.010 .200	✓		12" caliper	ED-14
	R0.063	+/-0.010 .060	✓		R-CG	
	2.740	+0.005/-0.000 2.738/2.740		✓	ED-14	
	5.097	+/-0.030 5.083	✓		"	
	2.304	+0.005/-0.000 2.302		✓	"	
	2.340	+0.005/-0.000 2.341	✓		"	
	2.398	+0.005/-0.000 2.399	✓		"	
	2.448	+0.005/-0.000 2.451	✓		"	
	2.498	+0.005/-0.000 2.501	✓		"	
	2.549	+0.005/-0.000 2.551	✓		"	
	2.599	+0.005/-0.000 2.605		✓	"	
	2.671	+0.005/-0.000 2.674	✓		"	
	2.701	+0.005/-0.000 2.708		✓	"	
	126.514	+/-0.020 126.500	✓		T.M ED-11	

Measured by:	S	Audited by:	CP	Prototype Approval:	N/A
Date:	10/09/23	Date:	10.09.23	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-101)	KJ/JLM	
B	06.03.15	Tolerance revised for 5.097 per Dwg Rev update	KJ/JLM	
C	07.05.28	Dwg Rev updated	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ	



SIDE A°		SIDE B	
2.364	0.151	0.152	0.149
2.340	0.165	0.168	0.164
2.448	0.170	0.162	0.171
2.498	0.260	0.255	0.241
2.498	0.284	0.276	0.271
			0.273
2.381	0.161	0.152	0.152
2.360	0.179	0.168	0.171
2.448	0.251	0.244	0.262
2.498	0.271	0.257	0.287
			0.276

From SR-D212-664-1

SECTION	Crosstube	Damage Tolerance	O.D. (in)	I.D. (in)	Area (in ²)	Inertia (in ⁴)
A-A	Bell Fwd	0.000	2.750	2.000	2.798	2.022
	Bell Fwd w/ dam. tol.	0.005			2.788	2.003
B-B	Dart Fwd	0.000	2.750	2.000	2.798	2.022
	Dart Fwd w/ dam. tol.	0.015			2.692	1.894
C-C	Bell Fwd	0.000	2.706	2.000	2.609	1.847
	Bell Fwd w/ dam. tol.	0.005			2.599	1.828
D-D	Dart Fwd	0.000	2.701	2.000	2.588	1.827
	Dart Fwd w/ dam. tol.	0.015			2.444	1.708
E-E	Bell Fwd	0.000	2.605	2.000	2.188	1.475
	Bell Fwd w/ dam. tol.	0.015			2.158	1.424
F-F	Dart Fwd	0.000	2.599	2.000	2.164	1.454
	Dart Fwd w/ dam. tol.	0.015			2.020	1.339
G-G	Bell Fwd	0.000	2.555	2.000	1.986	1.306
	Bell Fwd w/ dam. tol.	0.015			1.956	1.258
H-H	Dart Fwd	0.000	2.549	2.000	1.961	1.287
	Dart Fwd w/ dam. tol.	0.015			1.817	1.173
I-I	Bell Fwd	0.000	2.504	2.000	1.783	1.144
	Bell Fwd w/ dam. tol.	0.010			1.763	1.113
J-J	Dart Fwd	0.000	2.499	2.000	1.763	1.129
	Dart Fwd w/ dam. tol.	0.015			1.619	1.017
K-K	Bell Fwd	0.000	2.404	2.000	1.397	0.854
	Bell Fwd w/ dam. tol.	0.010			1.377	0.825
L-L	Dart Fwd	0.000	2.394	2.000	1.360	0.827
	Dart Fwd w/ dam. tol.	0.012			1.222	0.728
M-M	Bell Fwd	0.000	2.300	2.000	1.013	0.588
	Bell Fwd w/ dam. tol.	0.010			0.993	0.562
N-N	Dart Fwd	0.000	2.289	2.000	0.974	0.562
	Dart Fwd w/ dam. tol.	0.012			0.835	0.466
O-O	Bell Fwd	0.000	2.750	2.000	2.798	2.022
	Bell Fwd w/ dam. tol.	0.030			2.738	1.909
P-P	Dart Fwd	0.000	2.740	2.000	2.755	1.981
	Dart Fwd w/ dam. tol.	0.030			2.581	1.804

SECTION	Cross tube	Bending Ultimate (lb*in)	Bending Yield (lb*in)	Tension Ultimate (lb)	Tension Yield (lb)	Shear Ultimate (lb)
A-A	Bell fwd w/ DT	96147	81580	184007	156127	117095
	Dart fwd w/ DT	106069	90916	207296	177682	110379
	Margin of Safety	0.10	0.11	0.13	0.14	-0.06
B-B	Bell fwd w/ DT	89184	75671	171563	145568	109176
	Dart fwd w/ DT	97364	83455	188197	161312	100209
	Margin of Safety	0.09	0.10	0.11	0.11	-0.08
C-C	Bell fwd w/ DT	72166	61232	142437	120856	90842
	Dart fwd w/ DT	79333	68000	155504	133289	82801
	Margin of Safety	0.10	0.11	0.09	0.10	-0.09
D-D	Bell fwd w/ DT	64967	55124	129063	109508	82131
	Dart fwd w/ DT	70890	60763	139937	119946	74512
	Margin of Safety	0.09	0.10	0.08	0.10	-0.09
E-E	Bell fwd w/ DT	58674	49784	116349	98721	74040
	Dart fwd w/ DT	62696	53739	124673	106863	66384
	Margin of Safety	0.07	0.08	0.07	0.08	-0.10
F-F	Bell fwd w/ DT	45310	38445	90908	77134	57851
	Dart fwd w/ DT	46818	40129	94065	80627	50087
	Margin of Safety	0.03	0.04	0.03	0.05	-0.13
G-G	Bell fwd w/ DT	32243	27358	65549	55617	41713
	Dart fwd w/ DT	31348	26870	64328	55138	34253
	Margin of Safety	-0.03	-0.02	-0.02	-0.01	-0.18
H-H	Bell fwd w/ DT	91610	77729	180707	153327	114995
	Dart fwd w/ DT	101390	86906	198720	170331	105812
	Margin of Safety	0.11	0.12	0.10	0.11	-0.08

$$F = \frac{Mc}{I}$$

Section near supports is
4x stronger inertia than
section G-G, however is is
under 10x as much moment.
Therefore it will fail before
section G-G. So Section G-G
is acceptable.

GP
10.09.28



Item	Qty -141	Qty -141B	Part Number	Description
1	X		D212-664-141	CROSS TUBE ASSEMBLY (205/212/412 HIGH FWD)
2		X	D212-664-141B	CROSS TUBE ASSEMBLY (214 HIGH FWD)
3	1	1	D6005-128	CROSSTUBE
4	2	2	D2893-1	SUPPORT
5	4	4	D3595-063-450	RUBBER CUSHION
6	4	4	MS21920-25	CLAMP (OR MS21920-26)
7	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6005-128
FINISHED LENGTH = 126.514±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF
USING VIBRATING STYLUS
- 7) WEIGHT: D212-664-141 = 33.6 lbs (PER IIN-D212-664)
D212-664-141B = 33.6 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2893-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SEARCHED
INDEXED
FILED
UNCCNTD
SUBJECT TO
WITHHELD
WORK
NO. - 62.167
Ref 10-G80

RELEASED
2009-10-29
M

D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -141B (ZN B4-2, D4-2); REMOVED REF & ADD TOLERANCES (ZN B4-3, C6-3, C8-3 & B6-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	PH	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	99	DRAWING NO.	REV. D
MFG. APPR.	DS	D212-664-141	SHEET 1 OF 4
APPROVED	AD	TITLE	SCALE
DE APPR.	SH	XTUBE ASSY (205/212/412 HI FWD)	NTS
DATE	09.09.30	COPYRIGHT © 2000 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN APPROVAL OF DART AEROSPACE LTD.			

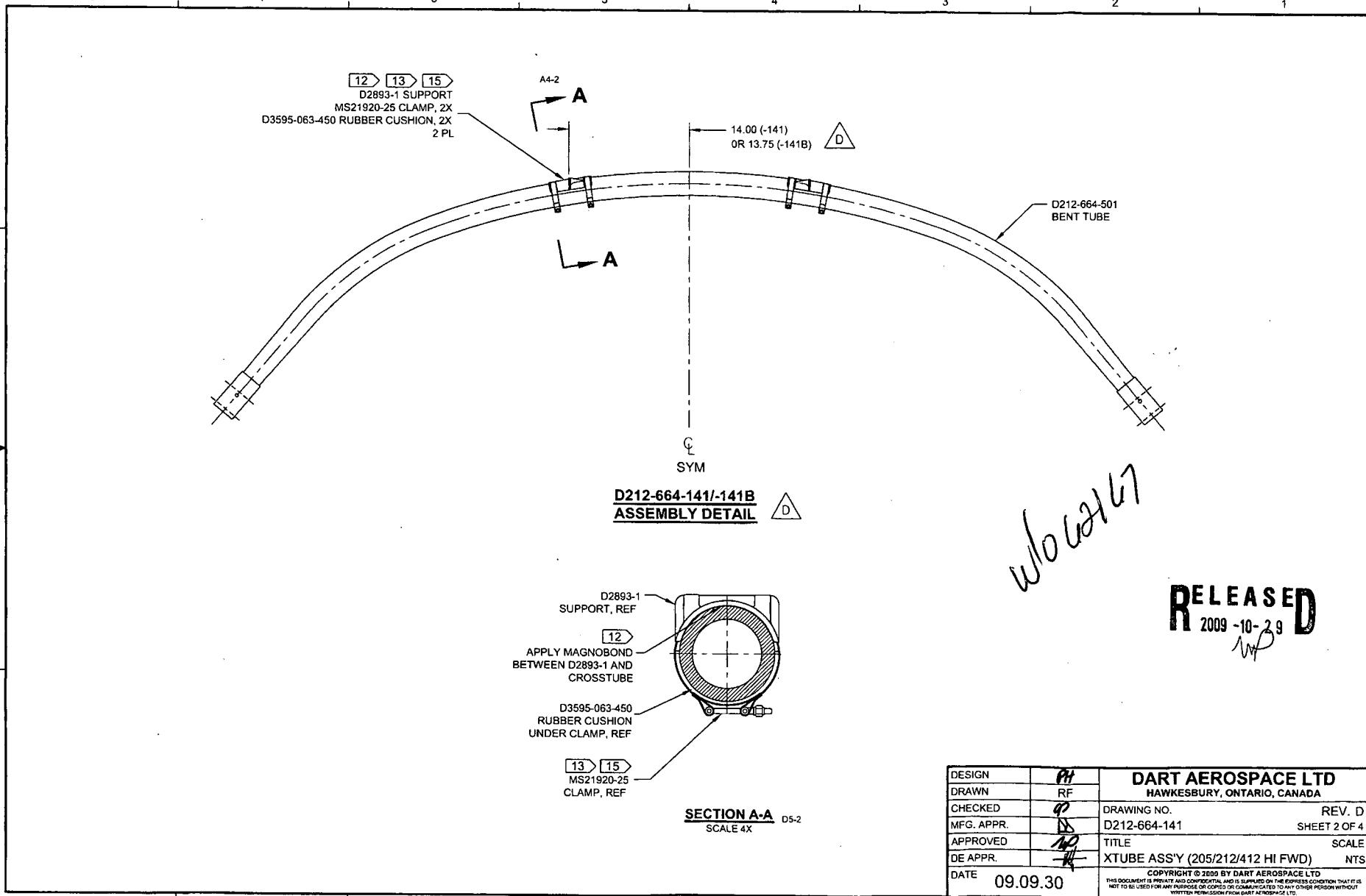
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



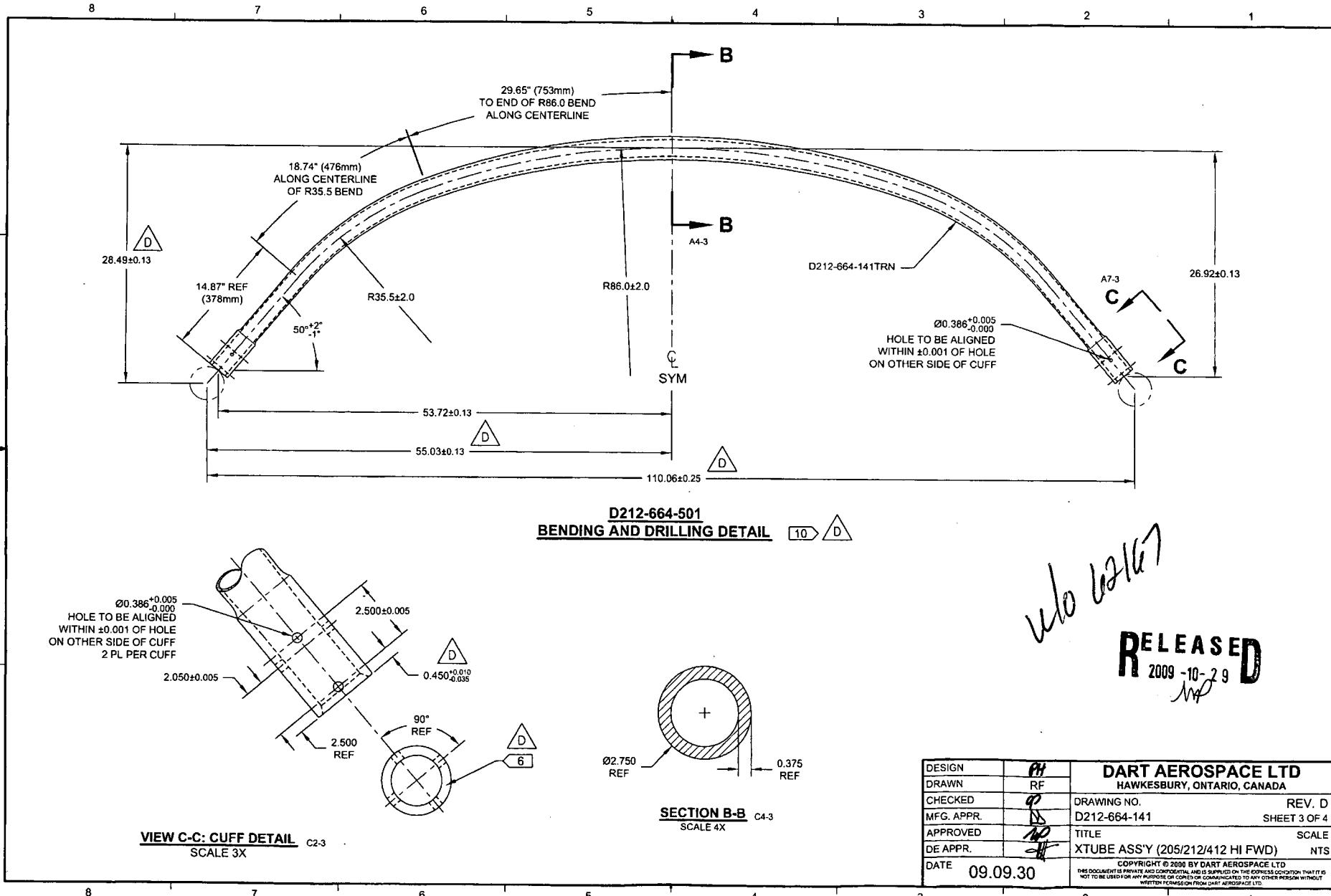
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



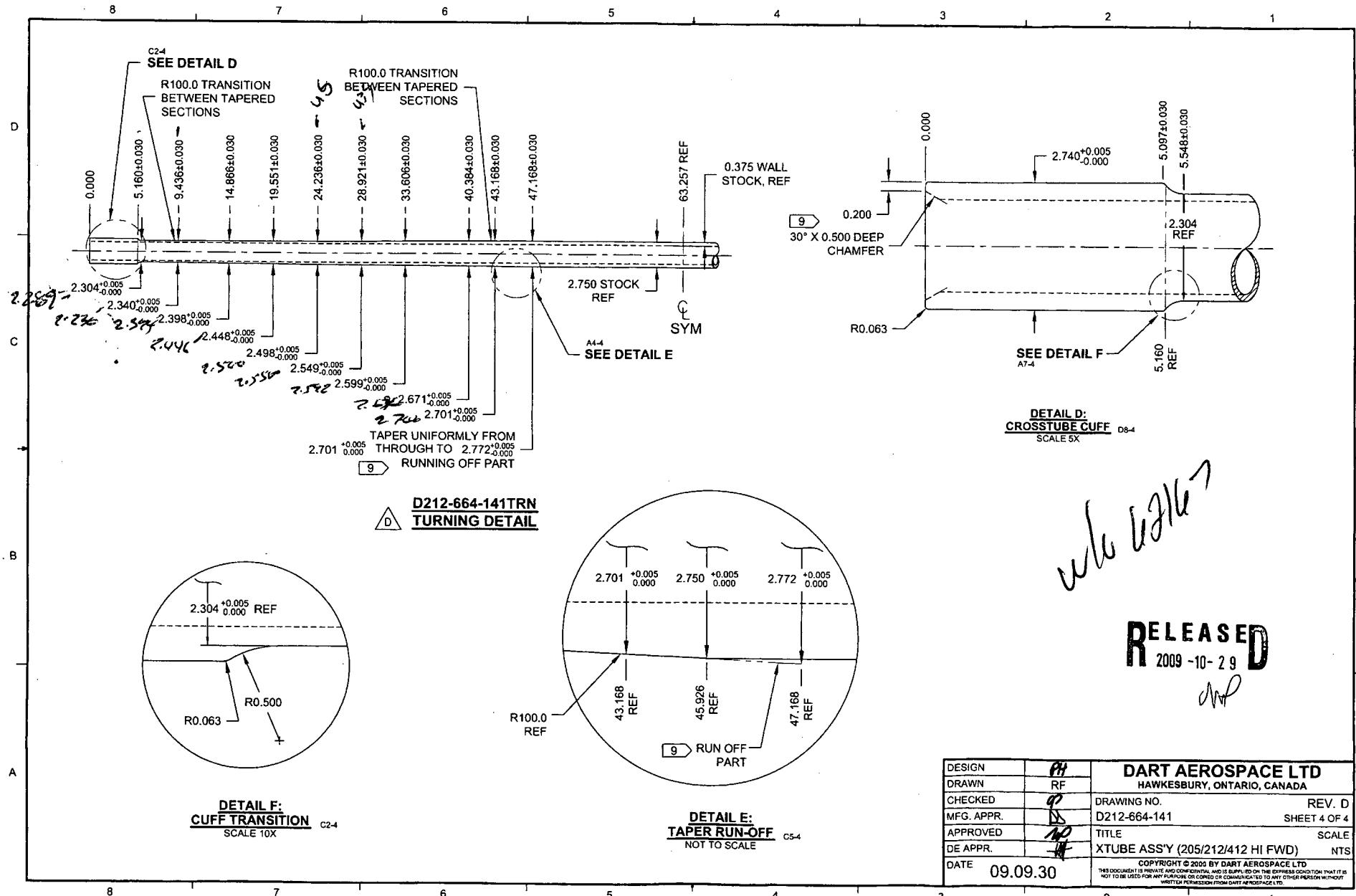
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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[Signature]

DESIGN	PH	DART AEROSPACE LTD	
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MFG. APPR.	DS	D212-664-141	SHEET 4 OF 4
APPROVED	NP	TITLE	SCALE
DE APPR.	HF	XTUBE ASSY'(205/212/412 HI FWD)	NTS
DATE	09.09.30	<small>COPYRIGHT © 2000 BY DART AEROSPACE LTD.</small> <small>THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE ON COMBED OR COMMUNICATED TO ANY OTHER PERSON UNLESS</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries